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February 6, 2019

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Re: **Wanhua Chemical US Operations LLC - MDI US Complex**
Addendum No. 1 to Initial Title V Permit Application
Permit No. 2560-00322-V0; Permit Activity No. PER20190001 ✓
Convent, St. James Parish, Louisiana
Agency Interest No. 215206 ✓

Dear Mr. Vega:

On behalf of our client, Wanhua Chemical US Operations LLC (Wanhua), CK Associates is submitting the attached Addendum to the Initial Title V Permit application for the MDI US Complex that was submitted on January 14, 2019.

The purpose of this Addendum is to update Section 1.2 of the "IT Decision" Questions Report (Report) that was included as Appendix B in the permit application. A revised Report is attached to this letter and should replace Appendix B of the initial application.

A copy of this Addendum is being submitted to the US EPA Region 6 via email. If you have any questions regarding this submittal, please contact us at [REDACTED] or Mr. Anthony (Tony) G. Foreman of Wanhua at [REDACTED]

Sincerely,
CK Associates

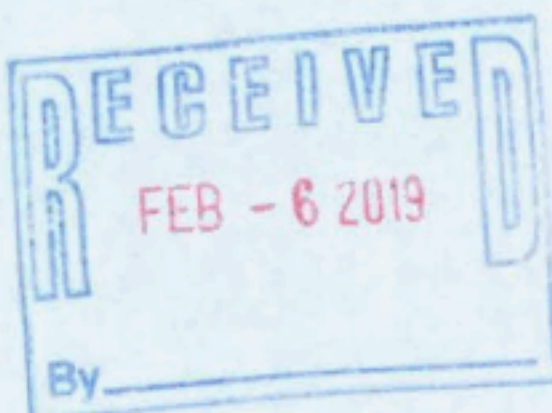
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Attachment



LDEQ
February 6, 2019
Page 2

cc with attachment:

US EPA Region 6 - Louisiana Air Permit Coordinator (via email to r6airpermitsla@epa.gov)
Mr. Corbet Mathis, LDEQ Air Permits
Mr. Anthony (Tony) G. Foreman, Wanhua

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1.0 Introduction and Overview

Pursuant to La. R.S. 30:2018.A, an Environmental Assessment Statement (EAS) is required for "a new permit or a major modification of an existing permit" where the discharge of water pollutants or air emissions would result in the facility being classified as a "major source." The purpose of the EAS is to "satisfy the public trustee requirements of Article IX, Section 1 of the Constitution of Louisiana" La. R.S. 30:2018.B. This constitutional provision states: "The natural resources of the state, including air and water, and the healthful, scenic, historic, and aesthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people."

1.1 Who is Wanhua?

Wanhua is a chemical manufacturing company with main business segments consisting of three parts: Polyurethane, Petrochemicals, and Performance Chemicals & Materials. Established in 1998, today Wanhua has two (2) MDI operating facilities in China and one (1) in Hungary. Polyurethanes, petrochemicals and specialty chemicals are part of its portfolio. The largest MDI production site is in Ningbo, China. Wanhua's vision is to become a global leader in the polyurethane industry through innovation and world-class operations. Wanhua employs approximately 14,000 employees worldwide.

Wanhua has had a presence in the United States for over a decade, with long term relationships with some of the most prominent global companies, large and small. Our reputation is well-established, and demand for our products has continued to grow. As a leading polyurethane supplier in the world, Wanhua is planning to construct and operate a MDI manufacturing facility in the U.S.

Wanhua Chemical Group is committed to a high standard of health, safety, and environmental performance and sustainable development in a socially responsible manner.

1.2 Project Purpose: MDI Complex US

Wanhua Chemical US Operations LLC, (herein called Wanhua) intends to build a grass root MDI facility in the state of Louisiana. The MDI manufacturing facility will have a plant capacity of 400 kilotonnes per year (kt/yr) of MDI. The core MDI process units are owned and operated by Wanhua with a third-party, co-located facility to supply Hydrogen and CO raw materials to the project. Additional providers will supply raw material such as aniline, chlorine, caustic soda, sulfuric acid and formaldehyde. Apart from the main process units, referred to as "inside battery limit (ISBL)", the facility will also include auxiliary process units, utilities, wastewater treatment, feedstock and product export pipeline, and infrastructure from the main process units referred to as outside battery limit (OSBL). The facility will produce a series of polymeric isomers of MDI to supply our domestic customers. In addition, an EDC plant will be constructed with a capacity of 260 kt/yr to consume the excess HCl generated during MDI production. The design life of the equipment in the facility is 25 years, but Wanhua is planning a significantly longer-term investment in this facility.

Over the next 7 to 10 years, Wanhua will continue to monitor and track global MDI demands. If market conditions indicate sustainable growth, Wanhua will consider expanding its US operations at that time. Prior to designing an expansion, Wanhua will conduct a thorough review of the air permitting process to ensure compliance with the New Source Review requirements. If necessary, Wanhua will submit a permit amendment to address the expansion.

MDI is a building block for polyurethanes. Polyurethanes are some of the most versatile polymers in existence and can be found in numerous forms ranging from lightweight, rigid foams to dense, solid compositions and from soft, flexible foams to tough, elastomeric moldings. Applications include construction, house and home, appliances, transportation and energy industries. It has been proven that polyurethane insulation is more energy efficient than conventional types of insulation (boasting a higher Energy Efficiency Rating).

2.0 Environmental Assessment

The EAS must include a detailed evaluation of both air and non-air environmental impacts of the Project. The LDEQ AAE form for RCRA and air permit applications provides that the following five questions must be addressed in the EAS:

Question 1: Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?

Response: Yes. The potential and real adverse environmental effect of the proposed facility have been avoided to the maximum extent possible. The potential and real adverse environmental effects of the project include potential impacts to surface water, groundwater, air quality, aesthetic impacts (visual/noise), safety risks, impacts to surrounding property values, wetlands impacts, and adverse impacts to sensitive environmental areas. Each of these potential impacts have been avoided or minimized as described both in the responses to the following questions as well as in the permit application. The facility is not anticipated to create any significant adverse environmental impact with the exception of the unavoidable loss of forested wetlands.

2.1 Potential Adverse Environmental Effects

The primary potential adverse impact of the facility to the environment would be from a fire that would occur from the ignition of flammable materials stored in containers (55-gallon drums) and tanks. Such a fire may release volatile hydrocarbon constituents to the atmosphere.

In case of emergencies, the facility will be equipped with sensors that are installed throughout the facility to facilitate the rapid detection and location of released flammable gases and fires. This system will include detectors/sensors for: flammable gases; fires and flames; leaks; smoke; and toxic gases. Automatic firewater supply and distribution

systems are installed for extinguishing fires and cooling the surfaces of storage vessels, piping, and equipment exposed to heat from a fire. A storage tank deluge system will also be installed to distribute water over the largest flammable tank's outer surfaces for cooling in the event of a fire on an adjacent tank. Foam systems will be prepositioned on critical components and additional mobile units will be available on site for use by trained personnel.

Wanhua's emergency response program will provide emergency health care information on the proper first aid treatment for exposure. It also will provide employee training for informing the public and response agencies (e.g., the fire department) should an incident occur. These response plans are being developed in accordance with state and federal regulations that apply to the complex. These response plans assure that appropriately trained people and equipment are in place such that potential adverse environmental effects from emergency incidents will be avoided to the maximum extent possible.

Another potential adverse impact would be from a spill that could occur either during delivery or during the process of introducing the waste materials into the waste storage tanks. The combination of properly designed facilities (based on over 20 years of operating experience) and thoroughly trained personnel accomplishes the goal of minimizing the potential for accidental releases. The facility will also adhere to the Process Safety Management (PSM) standards regulated by OSHA and Risk Management Program (RMP) regulated by EPA.

Potential adverse environmental effects include:

1. General adverse environmental effects include those that could be related to the projects taken as a whole (e.g., proximity to sensitive areas, etc.).

The proposed MDI facility will be constructed on property immediately adjacent to the existing industrial facility in Convent, Louisiana, and will have minimal impact on human health or sensitive environmental receptors. The site proposed for the greenfield facility is a former industrial area known as CS Metals, and a portion of the site was formerly used as agricultural/farm land (sugarcane production). The area is planned for industrial development.

As discussed herein in the section addressing Question 4, Wanhua conducted a national search for appropriate industrial sites for the MDI project. As part of that larger search the St. James Parish/Convent facility was studied. The controlling factors included:

- a. Access to deep water port
- b. Established rail transportation
- c. Important industry partnerships
- d. A supportive local community
- e. Government and business climate
- f. Large tract of contiguous land

- g. Fence line availability of raw materials and utility infrastructure
- h. Skilled workforce
- i. Minimal environmental impacts

The results of those studies concluded that a large empty tract of land immediately adjacent to the existing industrial facility met the decision criteria and was the best overall site from an environmental impact viewpoint.

The construction of the project will result in the minimal filling and/or drainage of jurisdictional wetlands that are considered to be "Waters of the US" (WOTUS) by the U.S. Army Corps of Engineers, New Orleans District (approximately 23 acres). Wanhua will work with the U.S. Army Corps of Engineers (USACE) and the Louisiana Department of Natural Resources (LDNR) to obtain a Coastal Use and Department of the Army permit. Compensatory mitigation for unavoidable impacts will be coordinated through each agency.

2. Effects associated with the construction phase of the projects (air emissions from construction equipment, construction stormwater runoff, etc.).
 - a. The primary construction phase potential adverse air environmental impacts consist of short-term increases in exhaust emissions from earth-moving equipment, cranes, and delivery vehicles. Construction supervisors will monitor construction related activities in accordance with contractor's required HSE plans and will notify contractors responsible for these tasks that they cannot operate equipment that performs poorly resulting in sooty exhaust emissions and that if such are observed, the contractor will be required to repair or replace the malfunctioning equipment.
 - b. Another potential adverse air environmental effect is higher dust emissions during dry weather due to the movement and activities of construction equipment and vehicles. Construction supervisors will make regular observations regarding the potential higher dust generation and will use water trucks and other techniques per LAC 33:III.1305 to dampen roads and trafficked areas as necessary.
 - c. The major process area equipment will be built modularly offsite and transported via marine vessels to the facility. Minimal stick-builds are planned. Any sandblasting and painting operations, if performed, will be conducted in adherence to applicable air emission regulations.
 - d. Waste generated from spill response cleanup efforts will be stored in closed containers and promptly disposed offsite in accordance with applicable regulatory requirements. General trash and debris generated during construction will be containerized and disposed offsite in accordance with applicable regulatory requirements. Used oil and lubricants from equipment maintenance will be stored in closed containers and managed by used oil recycling contractors. Additionally,

all recyclable construction material wastes such as metals and electrical cable will be segregated for management by recycling contractors.

The inspection and preventive maintenance activities will be conducted by contractors in accordance with their HSE plan will include the implementation of a Construction Storm Water Pollution Prevention Plan (CSWPPP). The CSWPPP will ensure that the potential adverse environmental effects associated with the generation of sediment will be managed in such a manner to comply with the Louisiana Pollutant Discharge Elimination System (LPDES) Construction Storm Water General Permit. Solid and/or hazardous wastes resulting from any spills of oil or hazardous substances associated with construction activities will be avoided to the maximum extent possible.

3. Effects associated with the operation of the proposed MDI facility (emissions to water, air, land, etc.). To avoid these effects, the appropriate control technology outlined in Maximum Achievable Control Technology (MACT) requirements is planned for the process equipment. All applicable air, water, and waste permits will be obtained and that the facility will be constructed and operated in a manner to comply with the requirements of the permits.

2.2 Real Adverse Environmental Effects

The real adverse environmental impacts of the permittee's proposed facility will be the impact on wetlands (23 acres) and the loss of farmland use approximately (250 acres). The facility is currently planned for industrial use.

The Wanhua US MDI Complex will be located on approximately 270 acres near Convent in St. James Parish. Light industrial and agricultural activities are currently in place in the area. Wanhua will design, construct, and operate the facility in accordance with good engineering practices. These practices utilize proven systems to provide maximum safeguards for the protection of the groundwater and surrounding environment. No adverse effects on groundwater resources are anticipated from the placement of foundations for the facility. This minimizes the discussions for geology, hydrology, topography, soil properties, aquifer locations, subsidence problems and climate control, however these topics are all address in the permit application to demonstrate no impact.

The Wanhua MDI facility will be designed to meet or exceed all existing environmental regulations in a manner that minimizes the potential for accidental releases. Facility design and operations will include structured operational practices that avoid and minimize adverse environmental impacts and accidental releases to the maximum extent possible. Safeguards will be included in the facility design to contain potential liquid release scenarios, such as secondary containment, to minimize offsite consequences.

The Wanhua facility will have a trained and dedicated staff to operate the facility. Operations, maintenance, and support personnel will be thoroughly trained and periodically tested in the proper use and operation of appropriate equipment and will be familiar with the potential hazards of operating the facility, both under normal and emergency conditions.

The likelihood of accidental releases and risk potential will be mitigated by the use of an enclosure of phosgene containing process and slight negative pressure of hazardous material handling equipment (blowers routed to thermal oxidation unit). Federal programs such as PSM and RMP, as well as La Chemical Accident Prevention and Minimization of Consequences in LAC Title 33.III Chapter 59 will be implemented.

3.0 Air Quality

The primary environmental impacts of construction of the Project will be to the air and water. During construction, construction machinery, as well as trucks transporting materials, personnel, and equipment to site will generate minimal air emissions.

Wanhua will handle a number of hazardous chemicals as provided in Table 1 but will utilize inherently safer process techniques and maintain operating procedures to protect those workers onsite and protect those living on the communities near the site.

Table1: Chemicals Used, Processed or Produced at the Facility

| Chemical Name | Transport Method | Process Use | Hazard |
|-------------------------|------------------|--------------------|-------------|
| Ammonia | Truck | Vent gas treatment | Acute Toxic |
| Aniline | Barge-Ship | Raw material | |
| Aniline Hydroxide | Pipeline | Intermediate | Acute Toxic |
| Formaldehyde (52%) | Truck | Raw Material | |
| Benzoyl Chloride | Truck | Process Chemical | Combustible |
| Carbon Monoxide | Pipeline | Raw material | Flammable |
| Chlorine (gas) | Pipeline | Raw material | Toxic |
| Ethylene | Pipeline | Raw material | Flammable |
| Caustic Soda | Pipeline | Process Chemical | Corrosive |
| Chlorobenzene | Rail and truck | Solvent | Combustible |
| Hydrogen Chloride | Pipeline | Byproduct | |
| Hydrochloric acid (32%) | Pipeline | Byproduct | Corrosive |
| Hydrogen Peroxide | Rail-Truck | Process Chemical | Oxidizer |
| Polyether polyol | Drum-Tote | Process Chemical | |
| Dipropylene glycol | Drum-Tote | Process Chemical | |

| | | | |
|------------------------|----------|------------------|-------------|
| Methanol | Pipeline | Byproduct | |
| Methylenedianiline | Pipeline | Intermediate | |
| Phosgene | Pipeline | Intermediate | Acute Toxic |
| Ethylene Dichloride | Pipeline | Product | |
| Methylene Diisocyanate | All | Product | Irritant |
| Toluene Diisocyanate | Ship | Process Chemical | |
| Toluene Diisocyanate | Rail | Product | |
| Propylene | pipeline | Refrigerant | Flammable |
| Oxygen | Pipeline | Raw Material | Flammable |

During the operations phase, the real impacts from air emissions from the facility will be minimal and will not cause any significant adverse impacts. Wherever technologically feasible, control equipment (e.g., tank/vessel scrubbers) will be employed to recover HCl, phosgene, chlorobenzene and methanol emissions from reactors and distillation units and recycle it back into the process. The boilers and related process equipment will emit only those pollutants associated with burning of clean fuels (i.e., natural gas), including carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (shown as PM_{2.5} and PM₁₀), sulfur dioxide (SO₂), volatile organic compounds (VOCs), and greenhouse gases (GHG).

Non-recovered process vents will be controlled with absorbers and carbon adsorption systems and final control element, thermal oxidation unit with heat recovery and selective catalytic reformer. Two steam boilers are controlled by ultra-low NO_x burners. Cooling towers are equipped with high efficiency drift eliminators to reduce PM₁₀, PM_{2.5} and VOC emissions. Various storage tanks that store oils and liquid hydrocarbons that will comply with stringent federal and state requirements including controls such as fixed roofs vented to control (either carbon absorption or thermal oxidation or a combination of these) and submerged fill pipe. Absorbers will control emissions from emergency events and storage vessels. Wastewater treatment processes will comply with federal requirements for emissions of air toxics. Emergency engines for firewater and power generation will meet the appropriate EPA Tier for emission control.

For purposes of the air permitting review, the new facility is considered to be a minor stationary source, under Louisiana Administrative Code Title 33, Part III, Section 509 (LAC 33:III.509 Prevention of Significant Deterioration (PSD)) and Title 40 Code of Federal Regulations (40 CFR) Part 52.21(b)(1)(i) as it will not have a potential to emit (PTE) for any regulated New Source Review (NSR) pollutant in an amount equal to or exceeding 100 tons per year (tpy). The facility's PTE for GHG emissions will be above the PSD trigger level of 100,000 tons per year, however, PSD is not triggered solely by GHG emissions.

All of St. James Parish is in attainment with each of the National Ambient Air Quality Standards (NAAQS) including the new ozone NAAQS promulgated on October 1, 2015 based on current monitoring data. The existing air quality within the parish meets all federal criteria pollutant standards that are protective of human health and the environment. The potential impacts from air emissions from the Project are not expected to cause any significant adverse impacts. No adverse environmental effect is anticipated with respect to the ambient air quality in St James Parish. Issuance of the Title V permit will ensure that applicable sources of hazardous air pollutants (HAPs) are controlled using maximum achievable control technology (MACT) per federal requirements.

In addition to meeting ambient air quality standards, emissions from the Project are subject to a wide array of federal and state technology-based air quality regulations.

3.1 Air Dispersion Modeling

During the permit review, air dispersion modeling will be used to evaluate air quality impacts analysis requirements and confirm that Wanhua has conducted an appropriate air quality impacts analysis and properly determined off-property impacts for the project facilities and associated sources. Wanhua's air quality impacts analysis, along with the permit reviewer and air dispersion modeling staff's evaluation and final recommendation, will provide a record that demonstrates that the operation of the proposed facility will not cause or contribute to a condition of air pollution. It should be noted that the modeling will only be conducted for the HAP/TAP Project emissions per the Ambient Air Standard (AAS) requirements of LAC 33:III.5109.B. Since PSD review is not triggered, NAAQS modeling will not be required.

The real adverse environmental effects of the proposed facility have been avoided to the maximum extent possible.

4.0 Water Quality

The impact to surface water resources will be minimized to the maximum extent practical. Prior to construction, Wanhua will submit a Notice of Intent (NOI) to apply for coverage under the General Permit for Discharges of Storm Water from Construction Activities of Five (5) Acres or More. As required by the general permit, Wanhua will develop and implement a construction storm water pollution prevention plan (CSWPPP) that will utilize best management practices (BMPs) to control and minimize the migration of sediment from being discharged into storm water from construction activities both within the proposed property boundary and surrounding lands. Throughout the duration of construction activities, Wanhua will conduct periodic inspections of employed BMPs for effectiveness. BMPs found to be inadequate will be promptly modified or replaced, as appropriate, to minimize sediment transport during wet weather events. Inspections will continue until final stabilization of the site has occurred.

All construction activities will occur either on or offsite of the existing Project site, impacts to soil, surface water, and groundwater, if any, are expected to be minimal. The Project will manage storm water through drainage and ponding systems, infrastructure and plans, and will implement

a Spill Prevention Control and Countermeasures (SPCC) and a Storm Water Pollution Prevention (SWPP) Plan to prevent the discharge of oil and pollutants into navigable waters. Best Management Practices will be employed during accidental releases to prevent and control the discharge of pollutants. The Project will involve installation of significant new utilities infrastructure, and manufacturing processes.

Adjacency to the OxyChem site allows the Wanhua facility to utilize the existing OxyChem infrastructure (loading dock). Mississippi River water will supply plant water to the site. Potable water will be supplied by the existing public water supply system. To minimize the demands on surface water resources, the Wanhua facility will utilize closed-looped, recycle cooling water units. The intake structure will be designed, constructed and operated to meet 316(b) requirements.

For the expansion of this project, some water intake from the Mississippi River is planned. Wastewater sent to the wastewater treatment system includes, but is not necessarily limited to, process wastewater, boiler blowdown, cooling unit blowdown, general use utility wastewaters, sanitary wastewater, and process area contact storm water (first flush only). Wastewater that is not reused, will be handled/treated by Wanhua and discharged to the Mississippi River.

In addition, the facility will require a new Louisiana Pollutant Discharge Elimination System (LPDES) permit that will authorize the discharge of process wastewater, storm water, hydrostatic test water, sanitary wastewater, and a waste brine stream.

Effluent discharged from Wanhua's wastewater treatment system will comply with the standards associated with the applicable subparts of the point source category effluent limitation guidelines at 40 CFR 414 - Organic Chemicals, Plastics and Synthetic Fibers (OCPSF) and 40 CFR 415 - Inorganic Chemical Manufacturing, Subpart AW. Compliance with these regulations will minimize potential impacts to the Mississippi River to the extent practical. Non-process area storm water will be routed to local drainage for discharge to the surrounding area.

4.1 Hydrology and Water Resources

4.1.1 Surface Waters

Wanhua will discharge treated wastewater, contact and non-contact storm water to the Mississippi River. The Mississippi River Basin is located in southeastern Louisiana and is positioned in an east-west direction. The drainage area of the Mississippi Basin comprises approximately 3,910 square miles. The headwaters of the Mississippi River are located in the hills west of Alexandria and the river flows south for about 160 miles to the Gulf of Mexico. The mouth of the river is about 30 miles east of the Mississippi/Louisiana state line. The landscape in this basin varies from pine-forested hills in the upper end to brackish and salt marshes in the lower reach around Swamp Maurepas.

The Project site has storm water management infrastructure (storm water collection pads in the process area, as well as two storm water holding tanks) for collecting and retaining

process-area storm water. The Project currently maintains a Storm Water Pollution Prevention Plan (SWPPP), which will be updated to reflect the new operator, any new site conditions, and up to date Best Management Practices (BMPs). The SWPPP incorporates conditions and BMPs to mitigate equipment failure such as tank overflow or leakage, precipitation events, and other circumstances which may result in a release of process materials to storm water runoff. No perceptible changes to storm water flows or management of such are expected, as a part of the Project. The Project will also utilize BMPs for the construction phase of the Project to minimize run-off of disturbed soils and sediments to Bayou Des Allemandes and surrounding surface water.

The Mississippi River starts at Lake Itasca in north central Minnesota and travels 2,350 miles south to its endpoint at the Gulf of Mexico near the city of New Orleans in Louisiana. Information provided in LDEQ's Final 2016 Integrated Report, as amended August 23, 2017, indicates the Mississippi River is in compliance with designated uses and water quality standards. The proposed discharges are not expected to adversely affect the designated uses of the Mississippi River. In addition, the effluent limits in the LPDES permit will be established by the LDEQ to ensure compliance with water quality standards of the receiving stream.

With the potential exception of oxygen demand, the facility is not expected to materially impact the impairment parameters. The impairment of dissolved oxygen places limitations on the allowable biochemical oxygen demand (BOD) of the wastewater discharges. As discussed in the following sections, the expected discharges from the facility are anticipated to be approved by LDEQ and EPA.

Process wastewater activities will include the water generated from stripper/ saturator blowdown, boiler feed water filter backwash, equipment cleaning, and spent caustic blowdown. Process wastewater will be treated by a tertiary aerobic wastewater process, which will include filtration by granular media.

Condensed boiler feed water is utilized to cool cracked gases in the Quench Tower. The quench water is stripped of volatile organics and used to saturate the feed gas stream. Excess quench water is directed following stripping to the wastewater treatment unit. Other contributions to the wastewater treatment system include boiler blowdown, furnace blowdown, various equipment washing discharge, process area storm water, waste brine, and maintenance wastewater. These wastewaters are treated and discharged to the Mississippi River via Outfall 001.

Equipment wash water, hydrostatic test water, non- contact storm water, clarifier underflow, and sanitary wastewater will be discharged via Outfall 002, and non-process area storm water via Outfall 003 to a local ditch. Outfalls 002 and 003 discharge to Swamp Maurepas without water treatment. Major pollutant in these streams are particulate matter. Silt fences and hay bales available during construction phase will remain during operational phase. Sanitary wastewater is treated on-site by anaerobic processes (Imhoff

settling, trickling filter, sedimentation, and chlorination), monitored as an internal outfall 102.

De minimus amounts of process wastewater constituents will be discharged to the waters of the Mississippi with no significant impact on aquatic life. The effluent will be monitored in accordance with the LPDES permit to verify that the discharge meets technology based effluent standards set in in the Clean Water Act.

In addition, Wanhua is assessing the feasibility of alternative technologies to further reduce the concentration of pollutants in wastewater. Wanhua is considering the use of Wet Air Oxidation to treat spent caustic blowdown. With this technology, organic carbons present in the wastewater are partially oxidized, which lowers the total pollutant load to be oxidized, and can assist with the aerobic wastewater treatment. Wet Air Oxidation has been used to improve the bio-treatability and lower the discharge of BOD. The effluent generated from this system will be treated by the biological wastewater treatment unit and discharged via Outfall 001.

4.1.2 Wetlands

According to flood zone and National Wetland Inventory (NWI) maps, the Project site is may be located within areas mapped as wetlands on the NWI maps, the project will submit data needed for US Army Corps of Engineers to determine any impact to wetlands. Any material impact to wetlands will be mitigated according to the USACE requirements.

Activities that impact wetlands or other waters of the U.S. will be evaluated by the USACE during the Department of the Army permitting. For the Department of the Army permit, the facility will identify potential location, quantity and category of wetlands impacted by the project. A Joint Permit Application (JPA) will be prepared for coordination as the project is located entirely within the Louisiana Coastal Zone. The JPA will be submitted to LDNR as the lead agency and will be provided to the USACE and other comment agencies.

Compensatory mitigation for wetland and coastal resource impacts will be accomplished using an approved mitigation bank or an approved permittee responsible mitigation plan that will be coordinated during the LDNR Coastal Use and Department of the Army permitting process. Wanhua has designed and structured construction and operations such that environmental impacts will be avoided and minimized to the maximum extent practical and further reduced by compensatory mitigation measures where needed.

5.0 Solid Waste and Hazardous Waste Management

Proper management of hazardous and non-hazardous solid waste is regulated under the Resource Conservation Recovery Act (RCRA). Under RCRA the EPA has developed regulations to set minimum national technical standards for how disposal facilities should be designed and operated; states issue permits to waste producers to ensure compliance with these standards.

5.1 Waste handling

Wanhua will register as a large quantity hazardous waste generator and a solid waste generator and will comply with all applicable Louisiana and federal requirements. Initially liquid and solid waste generated will be sent offsite for disposal until a RCRA permit is obtained. Once the permit is received, then liquid waste treated onsite in accordance to RCRA requirements.

5.1.1 Classes of chemicals

Wanhua plans to store and ultimately treat the following spent materials that are defined as characteristic hazardous wastes: D001 (ignitable), D002 (corrosive), and D003 (reactive). It will also manage materials that are classified as listed hazardous wastes: K019 (heavy ends from the distillation of ethylene dichloride in ethylene dichloride production), F002 (spent halogenated solvent – chlorobenzene), and U154 (waste methanol byproduct). Both K019 and F002 wastes are listed because of the potential to contain greater than 10% volume concentrations of ethylene dichloride and chlorobenzene.

5.1.2 Quantities (hazardous and nonhazardous)

Wanhua will treat approximately 300,000 to 400,000 pounds of waste solvents/catalysts/adsorbents per year, with the capability of managing up to 1 million pounds per year (depending on the unit operations).

Two waste storage tanks (T1111 and T1112) are each designed and will be permitted to store up to 40,000 gallons of hazardous waste. The proposed container storage area (Chemical Waste Warehouse) is designed to store up to 60,000 gallons of hazardous waste, mostly waste activated carbon and filter cartridges (contaminated with chlorobenzene, phosgene, or methylene diphenyl diisocyanate) and tank sludges.

Non-hazardous solid wastes such as construction debris, paper and cardboard waste, and plastic packaging materials will be generated during the construction and operations phases of the Project. These wastes will be recycled to the extent practicable.

Non-hazardous waste consisting primarily of contaminated filter cartridges, waste packing and catalysts. Trace amounts of aniline, chlorobenzene, phosgene or MDI may be deposited on these materials. It is estimated that 200,000 pounds of non-hazardous waste will be generated annually.

5.2 Waste Management

During operations phase, waste streams will be segregated. Liquid wastes will be stored in storage tanks with secondary containment, which will be labeled and inspected per applicable regulatory requirements. The materials could include: contaminated equipment wash; sludge from existing equipment, tanks and basins. All solid wastes except bulk cardboard wastes will be kept in portable, leakproof covered containers. Bulk wastes will be managed so as to prevent impacts to soil and runoff. Once full, contents

of tanks and containers will be tested to determine whether they are hazardous or non-hazardous, then transported and disposed by licensed third party TSDF waste contractors at appropriately permitted waste management facilities. Due to the quantity and type of liquid waste generated, the facility will construct a hazardous waste thermal oxidizer unit capable of treating these streams onsite. Hazardous waste storage tanks and hazardous waste container storage will change from < 90-day storage facilities to RCRA storage upon securing Part B permit. Only waste generated by Wanhua will be stored and treated onsite by Wanhua. Other third party co-located entities will manage their waste responsibly. There is currently no plan to have the following storage or treatment facilities onsite: landfill or deep well injection.

5.2.1 Treatment

Treatment, as defined in the LDEQ hazardous waste regulations, occurs at the facility. A permit application for storing and treating the waste materials will be obtained prior to onsite thermal incineration. Due to the combustible nature of the waste, incineration and storage prior to on-site incineration has been determined to be the most reliable technology for treating the waste generated on-site. Detailed information associated with the incineration technology and monitoring requirements is describe in the permit application. By design, the incinerators will only treat waste generated on-site; there will be no receipt of waste from off-site.

5.2.2 Storage

Wanhua owns all of the waste processed at the facility. Prior to permit issuance, waste generated will be stored for less than 90 days and transported off-site to a permitted TSDF facility. Detailed generation and storage records are maintained. Records consist of material balances, manifests, shipping documentation, container tracking, laboratory analyses, and transport to insure proper accountability and disposal of materials.

Waste materials are accumulated at the production units and transported by forklift to the Chemical Waste Warehouse. The containers are placed on pallets to ensure that they can be safely stacked. The waste is then sampled and analyzed according to the Waste Analysis Plan following strict quality assurance/quality control procedures as discussed in the Waste Analysis Plan and logged into the Hazardous Waste Inventory maintained for the site. Wanhua will not receive any waste from off-site.

Waste will also be stored in tanks with direct feed from the process units for direct injection/feed to the thermal oxidizers. Waste characterization is obtained to insure contaminant levels are at or below the levels established as the result of the proposed trial burn. Analysis will be obtained on a routine basis to insure hazardous constituents to no exceed those demonstrated during the trial burn.

The containerized materials are segregated by type, which includes the waste characteristic, and stored in accessible rows in the hazardous waste container storage

area. The containers are transferred by forklift for introduction into the waste storage area.

No wastes will remain onsite permanently, which eliminates the possibility of long term effects. Wanhua will be responsible for any post-closure costs associated with closure of the site that is demonstrated at the time of closure and financial assurance will be established to handle any non-anticipated long-term effects. Although, not anticipated, a conveyance notice will be filed in the deed in the event waste remain on-site. This is to insure there will be no unwilling buying of the land after closure. Future use of the property after closure in 30 years, will be determined by the purchaser.

Table 2: Waste Generated at Wanhua US MDI Complex

| Waste stream | Waste class | Quantity, lbs/yr | Waste classification | Disposal | Onsite/offsite |
|-------------------------|--------------------|-------------------------|-----------------------------|-------------------|-----------------------|
| Construction debris | Solid | 100,000 | Non-hazardous | Landfill | Offsite |
| Plant Trash | Solid | 140,00 | Non-hazardous | Landfill | Offsite |
| Waste solvent | Liquid | 130,000 | Listed, F | Thermal Oxidation | Onsite |
| Off spec raw material | Liquid | 80,000 | Characteristic | Thermal Oxidation | Onsite |
| Waste product | Liquid | 2,000 | Characteristic | Thermal Oxidation | Onsite |
| Lab wastes | Liquid | 4,000 | Characteristic | Thermal Oxidation | Onsite |
| Waste methanol | Liquid | 800,000 | Listed, U | Thermal Oxidation | Onsite |
| EDC distillates bottoms | Liquid | 8,600,000 | Listed, K | Thermal Oxidation | Onsite |

In addition to minimizing the impact to air, water and soil. The design and operation of the facility will insure there will be no impact to any potential food sources, day care centers, hospitals, prisons, public buildings or recreational facilities in the area in the area.

6.0 Biological Resources

The Project site and immediate surrounding areas are used for heavy industrial activities and therefore not conducive to vegetation and wildlife habitat. A portion of the area where the facility is to be located consists of forested wetlands. The Louisiana Department of Wildlife and Fisheries, Natural Heritage Program lists forested wetlands as a Natural Community within Louisiana. Impacts to these resources will be limited to only those necessary for the construction of the facility and associated infrastructure. The surrounding forested areas are sufficient to absorb wildlife displaced during construction.

Wanhua has conducted a review of threatened and endangered (T&E) species listed in St. James Parish. Listed species were determined by conducting an initial project review through the US Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) on-line tool. Listed species include the following:

- Piping plover (*Charadrius melodus*),
- Red knot (*Calidris canutus rufa*),
- Atlantic sturgeon (*Acipenser oxyrinchus*),
- Pallid sturgeon (*Scaphirhynchus albus*),
- West Indian manatee (*Trichechus manatus*),
- Hawksbill sea turtle (*Eretmochelys imbricata*),

Although there are threatened and endangered species listed for St. James Parish, none of these species or their associated habitats were identified within or adjacent to the proposed site. Since the site has previously been cleared, and site improvements made, the lack of suitable nesting or foraging habitats on the property for the known endangered and threatened species in the area furthers this belief. Adjacent habitat is present to absorb any displaced wildlife during construction.

In accordance with the May 2015 Memorandum of Understanding between the LDEQ and Fish and Wildlife Service (FWS) no further informal consultation is required, as noted in Section 7 of the Endangered Species Act. A prior LPDES Fact Sheet and Rationale noted that process discharges from the Project are not likely to have an adverse effect on any endangered species or critical habitats. The effluent limits established in the LPDES permit, to be issued when the facility was operational, ensure protection of aquatic life and maintenance of the receiving water as an aquatic habitat. Where applicable, LDEQ has established a Total Maximal Daily Load (TMDL) to protect these habitats. No TMDL established for this section of the Mississippi River.

Discharge of wastewater to the Mississippi River has the potential to affect aquatic species inhabiting this water body. The Project will be subject to discharge limits based on a facility specific waste load allocation permit to prevent water quality deterioration.

Additionally, Wanhua will utilize municipal water supply for sanitary purposes. Wanhua does plan to install a cooling water intake structure in compliance with the Section 316(b) of the Clean Water Act. I. Therefore, Wanhua does not anticipate any adverse impact to aquatic species by impingement or entrainment from cooling water intake structures during Phase I of the project. River water is treated by the Boiler Feed Water Treatment system to produce feed water. This system produces a blowdown from each of the three filters and two ion-exchange units. This wastewater stream is discharged to the process wastewater treatment system for discharge by Outfall 001.

No groundwater withdrawal wells are planned; therefore, impacts to soil and groundwater, if any, are expected to be minimal.

6.1 Archaeological and Historic Resources

The project site was surveyed for any archaeologically significant sites within the property boundaries. None were found. No cultural or historic resources listed in or eligible for listing in the National Register of Historic Places or the Louisiana Historic Register are located within the Project.

However, resources could be found during construction and an inadvertent discovery plan will be developed and implemented during construction. This measure would avoid potential adverse impacts to unanticipated cultural resources on the Project.

6.2 Cultural Resources

St. James Parish is located within Management Unit V, as defined in "Louisiana's Comprehensive Archaeological Plan" (Smith et al. 1983). This management unit is defined based on common geography, culture, and economic development. Management Unit V is characterized by landscapes of the Lower Mississippi River valley, which are dominated by "low-lying swampland, natural and man-made levees, and coastal marsh" (Smith et al. 1983:93).

Cultural resource background information was obtained for previously recorded historic and prehistoric archaeological sites, historic standing structures, cemeteries, and listed National Register of Historic Places (NRHP) properties within this parish. A summary of the various data sources from which information was gathered is presented below:

- Louisiana Division of Archaeology (site forms), located in Baton Rouge, Louisiana;
- Louisiana Division of Historic Preservation/State Library (historic standing structures), located in Baton Rouge, Louisiana;
- Louisiana Cultural Resources Map hosted by the Louisiana Division of Archaeology;
- NRHP online database (<http://nrhp.focus.nps.gov>); and,
- The Louisiana Division of Historic Preservation National Register Website (<http://www.crt.state.la.us/hp/nhl>).

This information provided a context for the subsequent discussions focusing on known cultural resource distributions within the proposed property. Slightly more than 72% of the property is characterized by low archaeological site potential soils associated with the natural levee/backswamp transition or backswamp environments; the remaining 28% of the property is characterized by more highly elevated, natural levee or batture deposits. These natural levee soils are considered to display higher archaeological potential. The majority of the property is currently managed as active agricultural fields. In addition, the Nita Crevasse, breached the Mississippi River levee in March of 1890, flooding the southern portion of the project area.

Although numerous archaeological sites have been identified both up and downriver from the property, no previously recorded archaeological sites have been identified within the

property boundary (Figure 2). A single historic standing structure (47-1556) was identified within the project property boundary. Construction appears to date to ca. 1891 and it was described as a Queen Anne residence. The structural integrity was considered Good; however, its potential for listing on the NRHP was not assessed by the recorders. No further archaeological sites, cemeteries, or listed NRHP properties are located within the bounds of the proposed property.

6.3 Land Use, Planning, and Visual Character

The Project area was agricultural since the early 1900s and is gradually becoming industrialized. The nearest residences are located approximately 0.8 mile to the northwest, one mile directly to the north of the site, and 1.1 mile directly west of the site. These areas are all buffered from the site by undeveloped lands or other non-industrial land uses, therefore there are no anticipated impacts on residential areas. The facility will not constitute a change in land use or visual character in the area.

6.4 Traffic and Transportation

The main transportation roadways that will be used by the Project are State Highway 3124 and 3125. At baseline these roadways do not experience high traffic volumes. During construction the Project will generate truck traffic from the transport of materials and wastes, and passenger vehicle traffic from worker commuting. Due to the limited nature of construction activities (modular design), Project truck traffic is expected to be minimal for the majority of the construction phase. While some instances of mobilization of large equipment such as cranes could result in infrequent and short-term delays in traffic, for the most part it is expected that industrial vehicle traffic from the Project will be imperceptible due to the low baseline traffic volume in the area. At peak construction, the 1000 construction workers commuting to the site will represent about a 5 percent increase in traffic on LA 44. This may cause slight delays at the plant entrance and nearby intersections during morning and afternoon rush hours. Wanhua will implement traffic management measures as needed such as engaging police to assist in directing traffic at the plant entrance during rush hours, or staggering construction worker shift start and end times. Operations traffic is expected to be minimal and will consist of worker commuting as well as operational deliveries.

Mode(s) of transportation used for the site will include truck, rail and marine (Barge and ship). Multiple modes of transportation alleviate the burden of any single mode (maximum number of trucks per day is estimated at 45). During operation, there is no anticipated impact on the public roads. They were all constructed to Louisiana DOTD standards.

The site will serve local, national and international customers.

6.5 Noise

St. James Parish's Code of Ordinances states that any loud, unnecessary or excessive noise that unreasonably interferes with the comfort and repose of others within the parish is

generally prohibited. In addition, construction and demolition noise is specifically prohibited within 165 feet of any residential or other noise sensitive area between sunset and sunrise on weekdays and Saturdays, and 9:00 pm and 8:00 am on Sundays and holidays except in the case of emergency work.

During construction, the major noise-producing activity will be installation of piles for some limited construction activity that will occur. As such this noise is expected to be infrequent and of temporary duration and will occur only during scheduled working hours (after 9 am and before 6 pm, Monday to Friday). This will not violate the specific prohibition on construction and demolition noise as all nearby residences and other noise-sensitive land uses are at a distance greater than 165 feet from the Project site. Similarly, due to the distance between the Project site and the nearest noise sensitive areas, it is not expected that the noise generated during construction will cause violation of the general prohibition on excessive noise.

During operations, noise-producing equipment will be equipped with acoustic hoods where reasonably practicable to abate operational noise. Periodic noise monitoring will be conducted to assure proper noise protection for employees, and as an added benefit to assure noise conservation to the public.

Question 2: Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?

Response: Yes. The social and economic benefits of the proposed facility greatly outweigh its environmental impact. As discussed above, the potential adverse impacts are minimal and significant design and planning measures have been or will be undertaken to avoid such impacts to the extent practicable. The Project will also stimulate the local, state, regional, and national economies through job creation, increased economic activity, and tax revenues. The facility will provide important economic and social benefits to St. James Parish and the State of Louisiana.

7.0 Economic Benefits

7.1 Economic Impact

Our \$1.25 billion investment will generate economic development. We will provide direct and indirect job opportunities for workers from the local community. This employment will have a direct economic impact in the local community when those employees spend money for housing, food, retail purchases, entertainment, etc. Additionally, we will purchase commodities and services from local companies, such as utilities, feedstock materials, and chemical blending services, as well as related logistics services, such as packaging and transportation services.

7.2 Construction Benefits

The construction phase of the Project will have a positive, short term impact on the local economy over its 12-month duration. The total capital investment is estimated at \$1.25 billion. The project will create 170 new direct jobs with an approximate annual salary of more than \$80,000, plus benefits. Louisiana Economic Development estimates the project will result in additional 1,060 new indirect jobs, for a total of 1,230 new permanent jobs in the state.

This will result in increased business activity associated with the construction, as measured by sales, and personal earnings. Additionally, during construction, there will be an increase in tax revenue to local parishes.

7.3 Operations Benefits

The economic benefits and spillovers from the construction phase of the Project are substantial but temporary. The economic benefits and spillovers from the ongoing operation of the facility are both substantial and permanent. Operation of the facility will have a positive effect on local tax revenue, based on tax revenue projections. These economic benefits will accrue to the State of Louisiana and the St. James Parish region for as long as the facility is operational. There is a demonstrated market demand and need for the Project. In recent years, the U.S. has experienced significant advances in polyurethane use and technologies, which have enabled broad enhanced access to polyurethane products.

Wanhua will strive to buy goods and services locally and hire locally for the construction and implementation of the facility. Wanhua has committed to holding pre-bid conferences for local suppliers and equipment providers to better understand and propose for procurements. By working with area public/private schools, vocational training centers, and higher education facilities, Wanhua can contribute to the preparation of local citizens to compete for and win employment opportunities. As a result, there will be a net social benefit to the community in and around the proposed Wanhua facility. Initial capital investment and subsequent operational expenditures will bring significant socioeconomic benefits to the region.

The Project's annual operating costs are estimated at \$133 million, of which the majority is expected to be procured locally. The majority of which are expected to be local, and with an approximate annual salary of more than \$80,000 plus benefits, which is above the median household income for the parish. Other operating expenses include chemicals, utilities, maintenance, overhead, insurance, and franchise tax; the majority of all expense categories will be procured locally, contributing to the local and regional economies. In addition, this creates an economic multiplier in the surrounding community for services such as dentist, doctors, schools, commodities, shopping areas, etc. in the 31-million-dollar range based upon baseline data developed determined by the Economic Department of Louisiana State University for other similar projects that indicates the multiplier to be roughly 5X the salaries.

By working with area public/private schools, vocational training centers, and higher education facilities, Wanhua can contribute to the preparation of local citizens to compete for and win employment opportunities. As a result, there will be a net social benefit to the community in and around the proposed Wanhua facility.

Operations phase jobs will include operators, technicians, supervisors, engineers and managers requiring specific educational and skill requirements. Wanhua will work with the Louisiana Economic Development (LED) FastStart program to recruit and train workers for the Project, with the objective of hiring employees locally to the extent possible.

These millions of dollars in annual payroll and material costs during operations will represent direct positive impacts to the economy in St James Parish and the wider region. They will also generate indirect and induced benefits as local merchants and service providers see an increase in their sales both from Project purchases and workers' expenditure of income, which could in turn result in increased production and/or hiring of more workers. It is expected that with the salaries, workers will purchase or build homes in the area, causing existing property values to increase. These benefits will continue over the life of the facility.

7.4 Tax Benefits

The Project will create significant new tax revenue at the local, State and Federal levels. During construction, local sales taxes will apply to capital expenses for materials and equipment. This will provide increased revenues to the parish's school board, law enforcement and municipalities.

During the operations phase, the estimated 15 million per year in direct payroll costs will generate payroll taxes, while other operational costs will generate sales tax and payroll taxes for contractors. The Project is also expected to pay taxes based on the profits generated from selling the facility's product.

Wanhua will hold a series of neighborhood meetings throughout St. James Parish in order to address any concerns that residents may have regarding the construction and operation of the facility. By listening to and acting upon the interests of the public, Wanhua can enhance the social benefits and further reduce the environmental impacts of the proposed project. There is not an anticipated rise in the cost for:

1. Police protection – onsite contract security staff planned
2. Fire protection – onsite first responders
3. Medical facilities – onsite EMT; on-call PA/ MD
4. Schools - The closest school is Fifth Ward Elementary School, located approximately 3.5 miles from the facility, therefore no potential health effect is anticipated.
5. Roads (also see below)-

The prospective site does not preclude economic development of the area by business or industries because of risk associated with establishing such operations adjacent to the proposed facility.

Question 3. Are there alternative projects which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefit?

Response: No, there are no alternative projects or facility types which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits. The facility is designed to handle the hazardous waste generated on-site to minimize the impact on the potential concerns associated with transporting the waste off-site for treatment. The primary goal of this project is to provide an economical resource and to meet the need of growing demand for polyurethane. The proposed project will provide the most effective, reliable, and state-of-the-art technology for the isocyanate process. In an effort to identify comparable system alternatives for the facility, Wanhua examined existing, approved, and other proposed MDI facilities. Information on alternative systems was obtained from the polyurethane website, project dockets, project websites, and media announcements. In comparison with other potentially applicable technologies, design and construction technologies of the proposed Project are equally effective in minimizing impacts to the environment.

Question 4. Are there alternative sites which would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits?

Response: No. There are no alternative sites which would meet the facility requirements and offer more protection to the environment than the location chosen for the proposed facility without unduly curtailing non-environmental benefits.

The Wanhua team began the site selection process in 2013. Initially, Wanhua explored potential sites along the East coast of the US due to its access to the Atlantic Ocean; however, none were found that could accommodate ships of the size required.

The site search continued by evaluating multiple sites in proximity to the Gulf of Mexico (with the intent of finding a location that would facilitate shipping, available raw materials). A site in Bolivar County, MS, owned by the local redevelopment authority, was of sufficient size and had access to the natural gas supply. However, it lacked direct access to shipping and would require a 303-mile methanol pipeline to reach a port for export. Two sites near Bayou Cassette in Pascagoula, MS were considered, as the area is industrially developed and has shipping access. These sites were removed from consideration due to environmental impact concerns.

Wanhua also evaluated two "brownfield" sites along the Houston ship channel. While providing sufficient natural gas supply and access to shipping, A third Texas site, near Port Arthur, would have required significant demolition activities and was located near a refinery that was identified by the EPA as having widespread contamination and/or numerous solid waste management units (SWMUs) to be cleaned up (2020 RCRA GPRA Corrective Action Work Plan for EPA Region 6, January 30, 2009, last updated March 21, 2012). Also, discussions with environmental permitting consultants indicated that air shed limitations presented challenges as well.

Within Louisiana, Wanhua considered a site in Iberville Parish, ten miles south of Baton Rouge, LA. The site had sufficient cleared land and access to the river for building a new dock; however, discussion with the nearby I-BC Sunshine terminal revealed that the river at this point did not have sufficient draft for the size ships Wanhua is intending to serve.

Finally, Wanhua was introduced to the Kinder Morgan team, who shared their extensive knowledge of locations throughout the U.S. Gulf Coast, and the St James Parish site was proposed. The Convent site (1) is in close proximity to a body of water that can handle large Panamax tankers, (2) has access to natural gas feedstock, and (3) is the closest terminal to the open waters of the Gulf of Mexico, over 150 miles below the next upriver methanol plant. The facility will utilize existing marine facilities at the OxyChem site, decreasing the land requirements.

After reviewing and visiting multiple sites, it was determined that the project site offered the required features, presented the fewest environmental impacts, and Sensitive Wildlife and/or Habitat was available on terms that Wanhua's financial projection goals. The service life of the facility is expected to exceed 30 years.

On-site treatment of the waste is the most effective method to insure the quantities of the waste generated on-site can be handled to avoid transportation on public roads and potential off-site exposure.

Hurricanes are a part of all siting determinations in Louisiana due to the proximity to the Gulf of Mexico. All measures are described in the waste permit application to address the potential impact of hurricanes and what measures have been taken to minimize the impact, including design, emergency procedures, and storm surge.

Question 5: Are there mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?

Response: No. There are no mitigating measures which would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits. Potential adverse effects associated with the construction, operation, and maintenance of the project will be mitigated to the extent practicable.

The process technology chosen utilizes pollution prevention practices of reduced inventories of hazardous chemicals, reuse/recycle philosophy and Best Available Control systems. The design is based on technology employed in operating units in other countries and improved to incorporate lessons learned from many years of operating experience. In addition, an assessment of environmental and reliability impacts based on current US regulations and RAGAGEP is being performed to identify and mitigate any deficiencies found.

8.0 Summary

Specific mitigation measures considered as part of the proposed facility have been discussed in the above responses and are included in the following summary:

- The site is currently planned for Industrial/agricultural and is suitable for industrial development.
- Transfer of construction materials and process equipment will occur primarily by truck utilizing existing roads but will also come via barge to lessen vehicle traffic. No significant impact on traffic patterns is expected in regard to the Wanhua project.
- There are expected to be no significant adverse impacts on historical, archaeological, estuarine, wildlife habitat, Indian mounds, antebellum homes, tourist attractions or prime agricultural areas as a result of the facility.
- Unavoidable impacts to wetlands and other waters of the U.S. will be mitigated. Compensatory mitigation will be coordinated with the U.S. Army Corps of Engineers and the Louisiana Department of Natural Resources as is applicable.
- The facility will provide increased economic and social benefits to the local and regional areas.
- Groundwater resources will be protected to the maximum extent possible. There are no land disposal units associated with this facility. All waste permitted facility are constructed on concrete slabs in diked areas. This minimizes any possibility of waste or waste residues into the environment.
- The Wanhua facility will utilize closed loop, recirculating cooling units to minimize potential impact on the Mississippi River resources.
- Only storm water from non-process areas will be directed to local drainage.
- Wastewater and process area storm water will be treated by Wanhua to achieve discharge limits imposed by state and federal regulations prior to being discharged to the Mississippi River.
- Air emission sources will be designed to meet all applicable NSPS as well as NESHAPs. An air dispersion modeling analysis will be used to demonstrate compliance with the Ambient Air Standards.
- Thermal treatment of waste generated onsite will be performed in accordance with RCRA and HWC MACT requirements. This treatment will be in accordance with emission limits established during trial burn and specified in the permit anticipated to be issued by the LDEQ. This minimizes any emissions to the air.